MINOX
EC

Type 10500

Ersatzteile
Reparatur

Spare Parts
Repairs

Pièces de rechange
Réparation

Repuestos
Reparación

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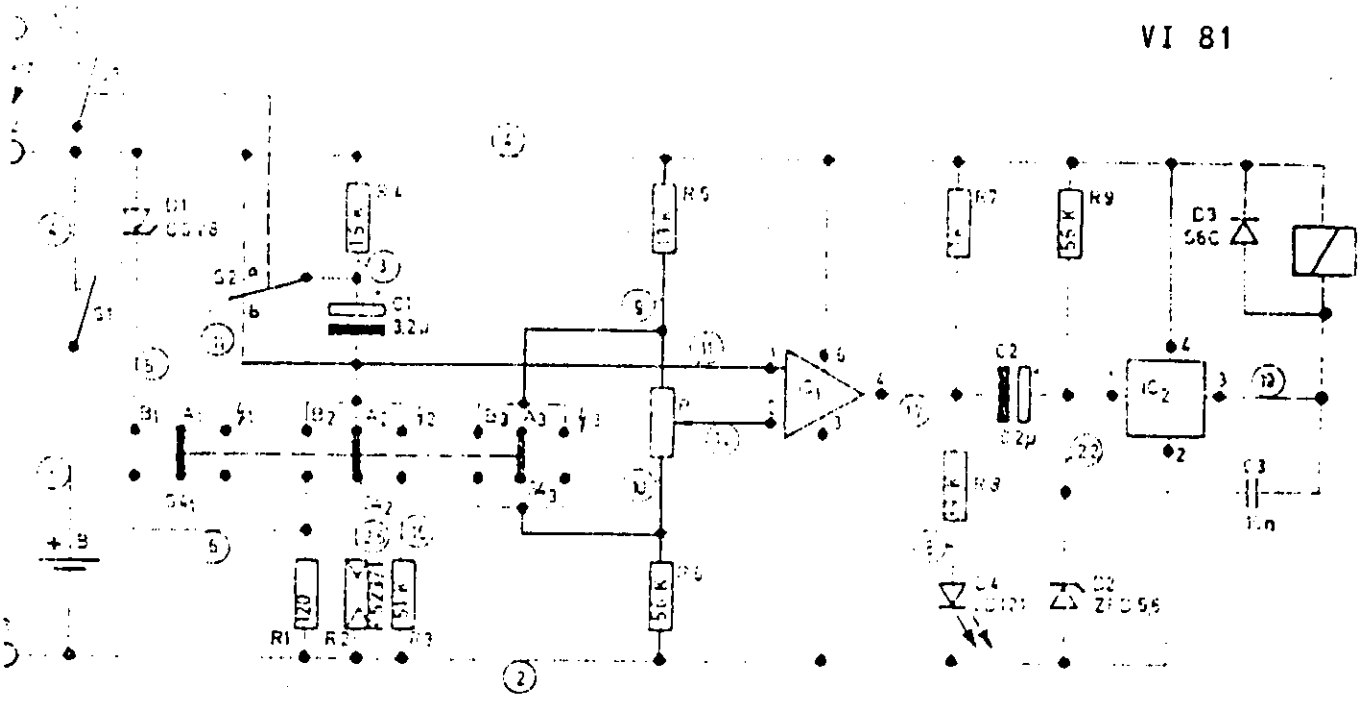
Bild-Nr Fig no	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr / Part no / No. de piece / No de pieza
1	1	Sleeve, complete	10500 58000
2	1	Camera back, complete	10500 52000
3	2	Screw, countersunk machine ⌀ Bg 1.45 x 2.35 mm	00000 30123
4	1	Latch pin	10500 50001
5	1	Pressure spring	00000 35057
6	1	Pressure plate, complete	10500 51000
7	1	Front cap, complete	10500 55000
8	2	Screw, countersunk machine ⌀ Bg 1.45 x 2.35 mm	00000 30123
9	1-2	Compensation filter 15,20....80.85%	10800 50007
10	1	Cap	10500 45001
11	1	Support plate	10500 40002
12	2	Screw, countersunk machine ⌀ Bg 1.45 x 5 mm	00000 30124
13	1	Battery Mallory PX 27 Varta V 27 PX Ucar EPX 27	
14	1	Battery cover	10500 60001
15	1	Base, complete	10500 42000
16	1	. Viewfinder window	10500 42002
17	1	. Viewfinder, complete	10500 44000
18	1	. space ring	10500 42001
19	1	. Eyepiece	10400 82003
20	1	Screw, countersunk machine ⌀ M 1.4 x 3 mm	00000 30072
21	1	Counter disc, complete	10500 41000
22	1	Space disc 5.5 ø x 2.05 ø x 0.1 mm	00000 31022

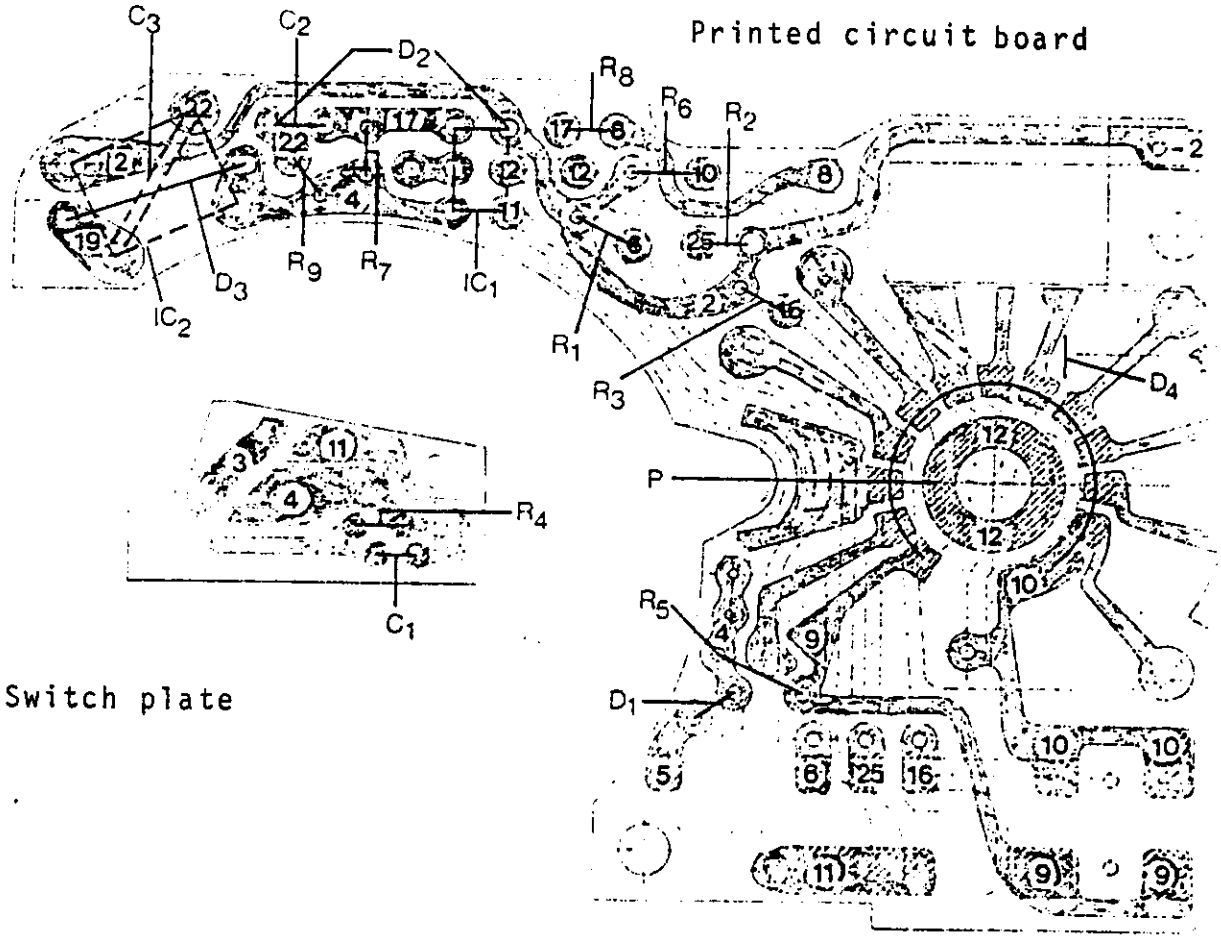
Bild-Nr Fig no	Stck qty	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr / Part no / No de piece / No de pieza
		Electronic Components	
110	1	Printed circuit board, complete	10500 05000
IC 1	1	. Threshold detector TCA 331 W or similar	10500 05005
	(1)	. Threshold detector TCA 331 W or similar	00000 36319
IC 2	1	. Threshold detector MCC 102 or sim.	10800 16110
	(1)	. Threshold detector MCC 102 or sim.	00000 36221
D1	1	. Z diode BZX 83 COV8 or similar	00000 36376
D2	1	. Z diode ZPD 5,6 or similar	00000 36376
D3	1	. Diode S 6 C or similar	00000 36015
D4	1	. LED red, LD 121 I or similar	10500 05108
	(1)	. LED red, LD 121 I or similar	00000 36320
R1	1	. Resistor 120 Ohm	00000 36387
	(1)	. Resistor 100 Ohm	00000 36341
	(1)	. Resistor 110 Ohm	00000 36404
	(1)	. Resistor 130 Ohm	00000 36405
	(1)	. Resistor 150 Ohm	00000 36267
	(1)	. Resistor 160 Ohm	00000 36406
	(1)	. Resistor 180 Ohm	00000 36388
R2	1	. Photo resistor K 523/1	10500 05007
R3	1	. Resistor 51 k Ohm	00000 36366
	(1)	. Resistor 47 k Ohm	00000 36228
R5	1	. Resistor 13 k Ohm	00000 36359
R6	1	. Resistor 56 k Ohm	00000 36360
R7	1	. Resistor 1 k Ohm	00000 36317
R8	1	. Resistor 3,9 k Ohm	00000 36186
R9	1	. Resistor 56 k Ohm	00000 36360
C2	1	. Tantalum capacitor 0,2 µF/20 V	00000 36335
C3	1	. Capacitor 10 nF	00000 36375
	1	. Flex, orange 24 mm long (Printed circuit board - switch plate)	10500 05010
	1	. Flex, orange 60 mm long (Printed circuit board - pressure plate)	10500 05011

Bild-Nr Fig. no	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr. / Part no / No. de piece / No de pieza
101	1	Body, welded	10500 01000
102	1	. Positive contact	10500 01005
103	1	. Tubular rivet 1.5 ø x 0.2 x 1.5mm	00000 23031
104	1	. Negative contact	10500 01015
105	1	. Insulating foil	10500 01017
106	2	. Contact spring	10500 01016
107	1	Lens, complete 1 : 5.6 / 15mm	10500 10000
108	1	Setting dial	10500 20001
109	1	Switch unit, complete	10500 08000
110	1	Printed circuit board, complete	10500 05000
111	1	Disc 3.2 ø x 2.1 ø x 0.2mm	00000 31106
112	2	Disc 3 ø x 1.5 ø x 0.3 mm	00000 31105
113	2	Screw, fillister Bg 1.4 x 2.5 mm	00000 30100
114	1	Control unit, complete	10500 15000
115	1	. Switch latch	10500 15002
116	1	. Screw, fillister M 1.2 x 0.7mm	00000 30129
117	2	Screw, countersunk machine M 1.2 x 2 mm	00000 30074
118	1	Insulating foil	10500 30004
119	1	Flap	10500 30101

Bild-Nr Fig no	Stck qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr / Part no / No de piece / No de pieza
201	1	Inner plate, complete	10500 24000
202	1	. Inner plate, riveted	10500 25000
203	1	. . Torsion spring	10500 25108
204	1	. Transport wheel, complete	10500 26000
205	1	. Transport block spring	10400 53007
206	1	. Rewind block spring	10400 53008
207	(1)	. Disc 8.4 ø x 6.85 ø x 0.05 mm	00000 31033
208	1	. Film core retainer	10400 53006
209	1	. Screw, fillister M 2.3 x 3.05 mm	00000 30012
210	1	. Shutter release latch, complete	10500 29000
211	1	. Screw, fillister	00000 30073
212	1	. Switch plate, complete	10500 31000
213	1	. Disc 3 ø x 1.5 ø x 0.3 mm	00000 31105
214	2	. Screw, fillister M 1.4 x 1.4 mm	00000 30002
215	1	. Tension lever, complete	10500 28000
216	1	. Film compensation lever II	10300 90402
217	1	. Retainer washer	00000 21017
218	1	. Switch spring	10500 24102
219	1	. Screw, fillister M 1.4 x 1 mm	10500 24006
220	1	. Guide plate	10500 30006
221	1	. Screw, countersunk machine M 1.4 x 1.5 mm	00000 30039
222	1	. Screw, set M 1.4 x 3.2 mm	00000 30065
223	1	Guide plate	10500 30006
224	1	Screw, countersunk machine Bg 1.4 x 4 mm	00000 30008
225	2	Screw, countersunk machine Bg 1.4 x 2.3 mm	00000 30102
226	1	Shutter release pin	10500 30002
227	1	Pressure spring 2.5 ø x 5.3 x 0.2	10500 30003

Bild-Nr Fig no	Stck qty	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr / Part no / No. de piece / No de pieza
	1	. Flex, green, 30 mm long (Printed circuit board - switch plate)	10500 05012
212	1	Switch plate, complete	10500 31000
	1	. Switch plate	10500 31001
R4	1	. Resistor 15 k Ohm	00000 36182
C1	1	. Tantalum capacitor 3,3 µF/6,3 V	00000 36385
	(1)	. Tantalum capacitor 3,0 µF/6,3 V	00000 36328
		Connecting Flexes:	
	1	Flex, orange, 30 mm long (Positive contact - pressure plate)	10500 03101
	1	Flex, blue, 24 mm long (Negative contact - printed circuit board)	10500 04101
	1	Flex, black, 45 mm long (Contact spring I - release latch)	10500 06101
	1	Flex, gray, 45 mm long (Contact spring II - printed circuit board)	10500 07101





Printed circuit board

Switch plate

Switching Functions:

S 1 Main switch (pressure plate, Fig. 6)

S 2 Shutter release switch (switch spring Fig. 218, on tension lever Fig. 215)

S 3 Flash switch (switch spring Fig. 218, on tension lever Fig. 215)

S 4 Selector switch for mode of operation (switch Fig. 109)

Switch settings:

A = automatic (automatic shutter)

ϟ = flash exposure time

B = battery check

Switchings x = contact closed x) = contact closed briefly		S1	S2		S3	S 4_1			S 4_2			S 4_3		
			a	b		B_1	A_1	ϟ$_1$	B_2	A_2	ϟ$_2$	B_3	A_3	ϟ$_3$
1a)	Camera closed, S 4 at A setting			x			x			x			x	
1b)	Camera closed, S 4 at ϟ setting			x				x			x			x
2a)	Camera extended, S 4 at A setting	x		x			x			x			x	
2b)	Camera extended, S 4 at ϟ setting	x		x				x			x			x
3a)	Camera released, S 4 at A setting	x	x		(x)		x			x			x	
3b)	Camera released, S 4 at ϟ setting	x	x		(x)			x			x			x
4a)	Battery check, camera extended	x		x		x			x			x		
4b)	Battery check, camera released	x	x		(x)	x			x			x		

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MINOX EC Testing Programme

1. Basic Measurement

O	L	R_i Ω	ASA	t_a ms	Remarks
A	M	22	100	6 - 36	if under 6 ms, insert 2 filters shutter must close
A	H	22	400	1 - 5	

2. Filter Selection (from basic measurement)

t_a ms	F %	t_a ms	F %	t_a ms	F %	t_a ms	F %
6 - 7,6	85	12,5 - 14,0	65	18,9 - 20,4	45	25,3 - 26,8	25
7,7 - 9,2	80	14,1 - 15,6	60	20,5 - 22	40	26,9 - 28,4	20
9,3 - 10,8	75	15,7 - 17,3	55	22,1 - 23,6	35	28,5 - 30	15
10,9 - 12,4	70	17,4 - 18,8	50	23,7 - 25,2	30	30,1 - 36	0

3. Final Measurement

O	L	R_i Ω	ASA	t_n ms	t_t ms	Remarks
A	M	22	100	32	22 - 44	
A	H	22	400	1	1 - 5,5	shutter must close
A	H	22	200	2	1,5 - 6,0	
A	D	22	200	1000	600 - 1600	darken any ambient light
A	M	22	200 ↓		LED out	LED must not light at any intermediate setting
A	M	22	50 ↓		LED on	
ϟ		35	50	32	22 - 50	shutter must close
ϟ		5	50			
B		25 ↓			LED on	
B		35 ↓			LED out	

4. Key

a) O = mode of operation
A = automatic
ϟ = flash exposure time
B = battery check
L = light

b) R_i = internal resistance of power supply for ϟ = 5,6 Ω

c) t_n = nominal shutter speed

d) t_a = actual shutter speed

e) t_t = [illegible] shutter speed [illegible]

f) F = [illegible]

Lubrication

The following lubricant must be used:

Molykote - D paste

Lubrication Points:

1. Lens thread (Fig. 107)
2. Smooth surface between set bolt on transport wheel (Fig. 204) and torsion spring (Fig. 203)
3. Smooth surface of the film compensation curve at the frame counter window (Fig. 21)